

**Notice of Allowability**

Application No.

10/696,402

Applicant(s)

HARDESTY ET AL.

Examiner

Art Unit

Deborah Yee

1742

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to APPLICANT'S REMARKS AND AMENDMENT DATED 10-24-06.
2. ☒ The allowed claim(s) is/are 8-10, 12-25 and 27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

Deborah Yee  
Primary Examiner  
Art Unit: 1742

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 27, on line1, "claim 26" has been changed to --claim 24---. Note examiner amended claim 27 because of its dependency on cancelled claim 26.

### ***Allowable Subject Matter***

2. Claims 8 to 10, 12 to 25 and 27 are allowed.
3. The following is an examiner's statement of reasons for allowance: The art of record does not teach or fairly suggest a welded steel and its method of making by using a stainless steel filler material having a composition, as claimed, wherein said filler metal, when melted and cooled between two steel components, produces a weld comprising martensite. Applicants have discovered that by forming martensite in the weld, it creates a volumetric change that results in a compressive stress in the surrounding base material. The compressive residual stress, in turn, counteracts the tensile residual stress in the part and minimizes distortion and shrinkage. This concept is not taught or suggest by prior art.
4. As stated in Applicant's remarks dated 10-24-06, Nishikawa et al (US Patent 5,124,529) discloses a welding wire having carbon concentrations between 0.008 to 0.024% which is lower than present invention carbon range is 0.05 to 0.10%, and

Art Unit: 1742

therefore not adaptable in forming a significant martensite phase . Also Nishikawa on lines 50 to 58 in column 4, contrary to the present invention, teaches away from a martensitic phase in the weld because it deteriorates ductility and toughness.

5. As stated in Applicant's remarks dated 5-08-06, the Japanese patents in office action dated 2-03-06 do not teach or fairly suggest the present invention.

6. Japanese patent 356105456 abstract and Japanese patent 358174554 describe steel that form a structural weld component containing 0.05 to 0.35% Ti and 0.05 to 0.3%, respectively, and are significantly lower than the claimed Ti range of 1.0 to 1.5%. Moreover, prior art describes a steel for structural weld components, as opposed to a filler metal for a weld.

7. Japanese patent 200094182 describes filler metal for welding but contains at most 0.015%C and 0.01 to 0.30%Ti which are lower than the claimed 0.05 to 0.1%C and 1.0 to 1.5%Ti, respectively. Also prior art does not teach or suggest a martensitic weldment.


8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-27211253. The examiner can normally be reached on monday-friday 6:00am-2:30pm.

Art Unit: 1742

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

dy